

## **PRODUCT SPECIFICATION**

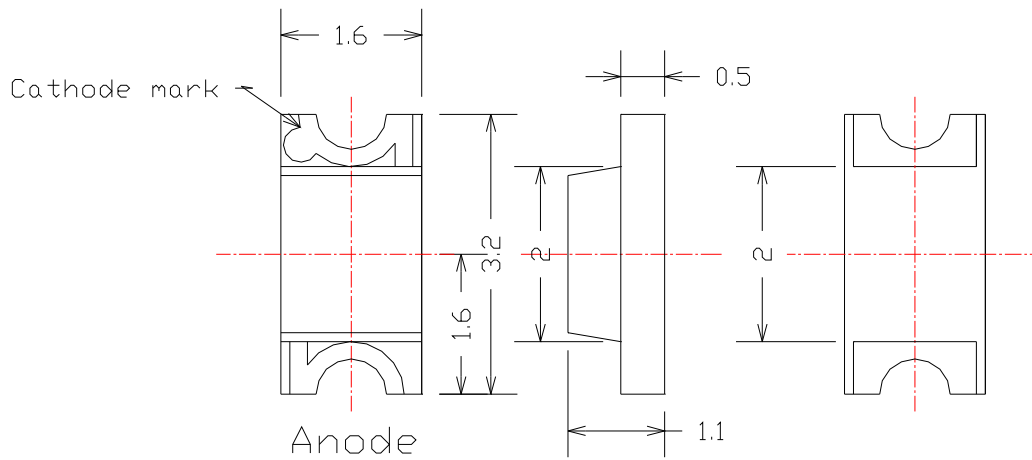
**Part No:** 1206white

**Color:** white

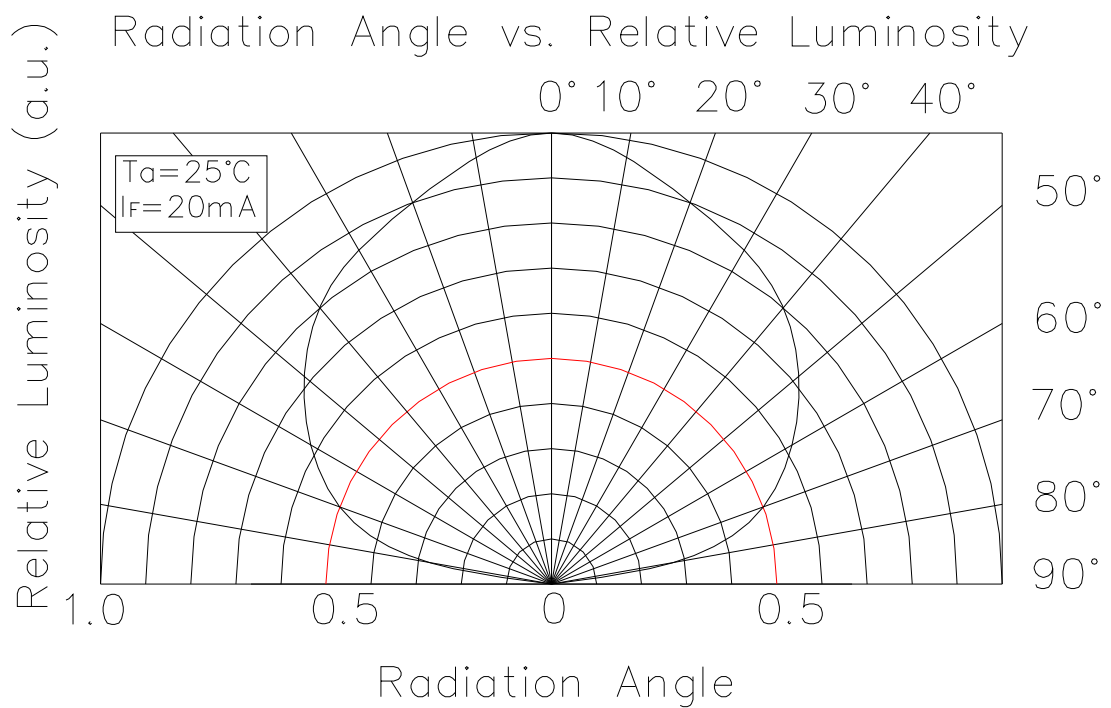
| <b>Customer Approved</b> | <b>Checked</b> | <b>Prepared</b> |
|--------------------------|----------------|-----------------|
|                          |                |                 |

# SMD-LED 1206 white

## ■ Outline Dimension:



## ■ View Angle:



# SMD-LED 1206 white

## ■ Absolute Maximum Ratings (Ta = 25°C)

| Items                      | Symbol           | Absolute maximum Rating                                            | Unit |
|----------------------------|------------------|--------------------------------------------------------------------|------|
| Power Dissipation          | P <sub>D</sub>   | 120                                                                | mW   |
| Forward Current(DC)        | I <sub>F</sub>   | 25                                                                 | mA   |
| Peak Forward Current       | I <sub>FP</sub>  | 100                                                                | mA   |
| Reverse Voltage            | V <sub>R</sub>   | 5                                                                  | V    |
| Operation Temperature      | T <sub>opr</sub> | - 20~ + 75                                                         | °C   |
| Storage Temperature        | T <sub>stg</sub> | - 30~ + 80                                                         | °C   |
| Lead Soldering Temperature | T <sub>sol</sub> | Max.260°C for 5 sec Max.<br>(3min from the base of the epoxy bulb) |      |

Pulse width ≤ 0.1msec duty ≤ 1/10

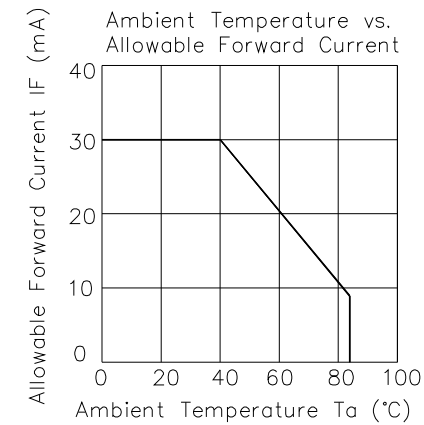
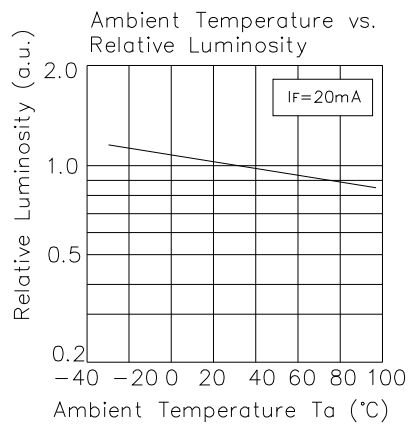
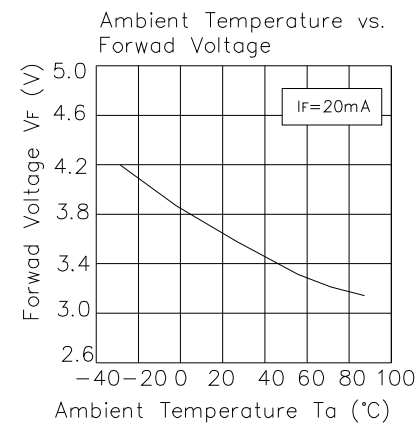
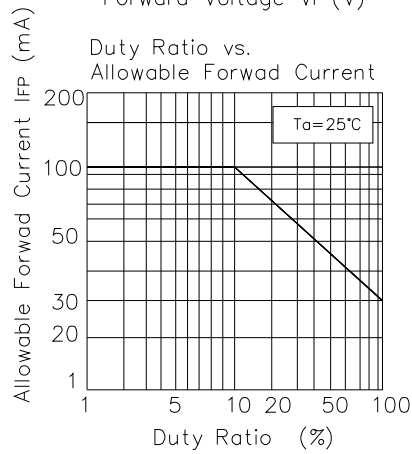
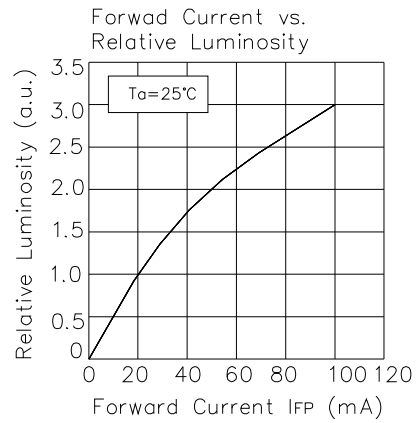
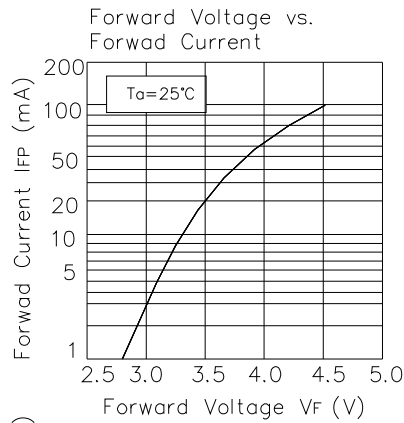
## ■ Typical Electrical & Optical Characteristics(Ta=25°)

| Items                 | Symbol         | Condition             | Min | Typ       | Max | Unit |
|-----------------------|----------------|-----------------------|-----|-----------|-----|------|
| Forward Voltage       | V <sub>F</sub> | I <sub>F</sub> = 20mA | 3.0 | 3.4       | 3.6 | V    |
| Reverse Current       | I <sub>R</sub> | V <sub>R</sub> = 5V   | --- | ---       | 50  | μ A  |
| Chromatic Coordinates | x, y           | I <sub>F</sub> = 20mA | --- | 0.31,0.32 | --- | nm   |
| Luminous Intensity    | I <sub>v</sub> | I <sub>F</sub> = 20mA | 110 | 140       |     | mcd  |
| View Angle            | 2 θ 1/2        | I <sub>F</sub> = 20mA | --- | 140       | --- | Deg  |

| Rank | Luminous Intensity (mcd) | Rank | Luminous Intensity (mcd) | Rank | Luminous Intensity (mcd) |
|------|--------------------------|------|--------------------------|------|--------------------------|
| K    | 105~150                  | L    | 150~210                  |      |                          |

# SMD-LED 1206 white

## ■ Typical Electrical/Optical Characteristics Curves:



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## ■ Reliability Test :

| Classification   | Test Item                    | Standard Test Method                                | Test Conditions                                           | Duration  | Units Tested | Number of Damaged |
|------------------|------------------------------|-----------------------------------------------------|-----------------------------------------------------------|-----------|--------------|-------------------|
| Life Test        | Operating Life Test          | JIS7021:B4<br>MIL-STD-202:107D<br>MIL-STD-750:1026  | T <sub>A</sub> =25°C ± 5°C, I <sub>F</sub> =30mA          | 1000h     | 22           | 0/22              |
| Environment Test | High Temperature Storage     | JIS7021:B10<br>MIL-STD-202:210A<br>MIL-STD-750:2031 | T <sub>A</sub> =100°C ± 5°C                               | 1000h     | 22           | 0/22              |
|                  | Low Temperature Storage      | JIS7021:B12                                         | T <sub>A</sub> = - 55°C ± 5°C                             | 1000h     | 22           | 0/22              |
|                  | Temp & Humidity Test         | JIS7021:B11<br>MIL-STD-202:103D                     | T <sub>A</sub> =85°C ± 5°C<br>RH=85% ± 5%RH               | 1000h     | 22           | 0/22              |
|                  | Thermal Shock Test           | JIS7021:B4<br>MIL-STD-202:107D<br>MIL-STD-750:1026  | - 10°C ± 5°C<br>← → 100°C ± 5°C<br>5min - 5min            | 50 Cycles | 22           | 0/22              |
|                  | Temperature Cycling Test     | JIS7021:A3<br>MIL-STD-202:107D<br>MIL-STD-750:1051  | - 55°C ~ 25°C ~ 85°C ~ 25°C<br>3min - 5min - 30min - 5min | 50 Cycles | 22           | 0/22              |
| Mechanical Test  | Resistance to Soldering Heat | JIS7021:A1<br>MIL-STD-202:210A<br>MIL-STD-750:2031  | 260 ± 5°C,<br>10 ± 1sec                                   | 1 time    | 22           | 0/22              |
|                  | Lead Integrity               | MIL-STD-750D<br>Method 2036.3                       | Load 2.5N<br>0° ~ 90° ~ 0°                                | 3time     | 22           | 0/22              |

### 2.Criteria for Judging The Damage

| Item               | Symbol         | Test Conditions      | Criteria for Judgment |                    |
|--------------------|----------------|----------------------|-----------------------|--------------------|
|                    |                |                      | Min                   | Max                |
| Forward Voltage    | V <sub>F</sub> | I <sub>F</sub> =20mA | ---                   | Initial Data × 1.1 |
| Luminous Intensity | I <sub>V</sub> | I <sub>F</sub> =20mA | ---                   | Initial Data × 0.7 |
|                    |                |                      | Initial Data × 0.7    | ---                |
| Reverse Current    | I <sub>R</sub> | V <sub>R</sub> =5V   | ---                   | 100 μ A            |